

ABSTRACT OF THE DISCLOSURE

A fuel cell includes cell assemblies connected to each other by a fuel gas connection passage, an oxygen-containing gas connection passage, and a coolant connection passage. A fuel gas adjusting mechanism, an oxygen-containing gas adjusting mechanism, and a coolant adjusting mechanism are connected respectively to the fuel gas connection passage, the oxygen-containing gas connection passage, and the coolant connection passage. These adjusting mechanisms adjust the temperatures in the cell assemblies, the relative humidity in the fuel gas, and the relative humidity in the oxygen-containing gas.